

CLAIMS

What is claimed is:

Sub A1 1. A method for a first device to establish a link between the first device and a second device, comprising:

5 transmitting a disconnect request message from the first device to the second device in response to a data link establish request; and

transmitting a request for connection to establish link message from the first device to the second device upon one of expiration of an awaiting-response timer, receiving a disconnect mode message from the second device, or receiving an
10 acknowledgement message from the second device.

2. The method of claim 1, wherein the disconnect request message transmitted by the first device to the second device includes a poll bit set to 0.

15 3. The method of claim 1, further comprising setting an awaiting-response-to-the-disconnect-message flag in response to receiving the data link establish request.

4. The method of claim 3, further comprising after transmitting the disconnect request message to the second device and upon receiving an acknowledgement message
20 from the second device, determining if the awaiting-response-to-the-disconnect-message flag is set, wherein the first device transmits the request for connection to establish link message to the second device upon receiving an acknowledgement message from the second device only if the awaiting-response-to-the-disconnect-message flag is set.

25 5. The method of claim 1 wherein said disconnect request message comprises a DISC message as specified by ITU Recommendation Q.921.

6. A computer program product for enabling a first device to establish a link between the first device and a second device, said computer program product comprising:

code that causes a processor to transmit a disconnect request message from the first device to the second device in response to a data link establish request;

code that causes said processor to transmit a request for connection to establish link message from the first device to the second device upon one of expiration of an awaiting-response timer, receiving a disconnect mode message from the second device, or receiving an acknowledgement message from the second device; and

a computer-readable medium for storing the codes.

7. The product of claim 6, wherein the disconnect request message transmitted by the first device to the second device includes a poll bit set to 0.

8. The product of claim 6, further comprising code that causes said processor to set an awaiting-response-to-the-disconnect-message flag in response to receiving the data link establish request.

9. The product of claim 8, further comprising code that, after the disconnect request message is transmitted to the second device and upon receiving an acknowledgement message from the second device, causes said processor to determine if the awaiting-response-to-the-disconnect-message flag is set, wherein the first device transmits the request for connection to establish link message to the second device upon receiving an acknowledgement message from the second device only if the awaiting-response-to-the-disconnect-message flag is set.

10. The product of claim 6 wherein said disconnect request message comprises a DISC message as specified by ITU Recommendation Q.921.

11. A first device that establishes a link to a second device, said first device comprising:

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a processor that executes software; and
a computer-readable storage medium that stores the software, said software comprising:

code that causes said processor to transmit a disconnect request message
5 from the first device to the second device in response to a data link establish request; and
code that causes said processor to transmit a request for connection to
establish link message from the first device to the second device upon one of
transmission timer expiration, receiving a disconnect mode message from the
second device, or receiving an acknowledgement message from the second
10 device.

12. The first device of claim 11, wherein the disconnect request message
transmitted by the first device to the second device includes a poll bit set to 0.

13. The first device of claim 11, wherein said software further comprises code
15 that causes said processor to set an awaiting-response-to-the-disconnect-message flag in
response to receiving the data link establish request.

14. The first device of claim 13, further comprising code that, after the
20 disconnect request message is transmitted to the second device and upon receiving an
acknowledgement message from the second device, causes said processor to determine if
the awaiting-response-to-the-disconnect-message flag is set, wherein the first device
transmits the request for connection to establish link message to the second device upon
receiving an acknowledgement message from the second device only if the awaiting-
25 response-to-the-disconnect-message flag is set.

15. The first device of claim 11 wherein said disconnect request message
comprises a DISC message as specified by ITU Recommendation Q.921.

16. Apparatus for a first device to establish a link between the first device and a second device, said apparatus comprising:

means for transmitting a disconnect request message from the first device to the second device in response to a data link establish request; and

5 means for transmitting a request for connection to establish link message from the first device to the second device upon one of expiration of an awaiting-response timer, receiving a disconnect mode message from the second device, or receiving an acknowledgement message from the second device.

10 17. The apparatus of claim 16, wherein the disconnect request message transmitted by the first device to the second device includes a poll bit set to 0.

18. The apparatus of claim 16, further comprising setting an awaiting-response-to-the-disconnect-message flag in response to receiving the data link establish request.

15 19. The apparatus of claim 18, further comprising means for, after transmitting the disconnect request message to the second device and upon receiving an acknowledgement message from the second device, determining if the awaiting-response-to-the-disconnect-message flag is set, wherein the first device transmits the request for
20 connection to establish link message to the second device upon receiving an acknowledgement message from the second device only if the awaiting-response-to-the-disconnect-message flag is set.

25 20. The apparatus of claim 16 wherein said disconnect request message comprises a DISC message as specified by ITU Recommendation Q.921.